

"User Experiences of Spanish-Speaking Latinos with the Frontier Behavioral Health Website"

Raquel L. Dean

Introduction

This paper will explore the topic of the rhetoric of the way information is designed in the field of technical communication. Rhetoric, in the most traditional sense, is the art of communicating effectively and efficiently, to a specific audience, in means of persuasion or informing. Rhetoric is involved in the way information is delivered to a given audience. This paper will focus on a website that delivers information regarding mental health services. The purpose of this will be to explore how the website is designed, how the content is presented, and the kind of experiences users have when they interact with the website. Individuals can be informed electronically (website, emails, blogs), word-of-mouth (being told by someone who has utilized that service), or through print (brochures, flyers, mail). For individuals to receive mental health services, they must first be informed about those services. There are many variables that may affect their access and availability to utilize these services.

For the purposes of this paper, I define Latino/a based on how it is defined by the U.S. Census Bureau, and the U.S. Office of Management and Budget (OMB): "Latino" is defined as "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race (2018). It is important to note here that the terms "Latino" and "Hispanic" refer to the same ethnic-minorities description provided by the U.S. Census Bureau—the terms are interchangeable.

Research shows that Latinos are the largest ethnic minority group in the United States and are projected to reach 90 million by 2025 and 97 million by the year 2050 (Shobe, Coffman, & Dmochowski, 2009. & Rastogi, Massey-Hastings, & Wieling, 2012). There are 50.5 million Latinos in the United States, which constitute 16% of the total U.S. population, and 66% of that Latino population are Mexican immigrants (Rastogi, Massey-Hastings, & Wieling, 2012). However, Latinos are half as likely to seek mental health services as Whites. Research has shown that there are system-level barriers (lack of Spanish-speaking service providers, inadequate training in the delivery of culturally competent services), as well as patient-level barriers (different views of mental health and mental health treatment, concern regarding stigma, and poverty) (Adams, 2007).

Empirical studies continue to support that although progress has been made in the field of technical communication, there is still a digital divide. St. Amant and Sapienza (2011) stated that "over the past decade, electronic communication

and new technologies have been steadily reshaping traditional communication practices” (406). Technical communicators must pay closer attention to how effective the delivery of their information design products is. According to Parry and Judge (2005) some populations are more difficult to reach with health messages, even among those with access to healthcare and preventative services (Clayman et. al 2010). In respect to the Latino population, its members may not have access and use the same information as non-Hispanics, due to language, cultural, and media-use differences (Viswanath, 2006).

The organization I chose to observe is Frontier Behavioral Health—a non-profit organization that offers individuals, ranging from youth, adults to elderly, access to psychiatric, psychological, and specialist consultation services. This project focused on facilitating usability tests that examined how Spanish-speaking Latinos interact with the Frontier Behavioral Health website. Through the facilitation of usability tests, I observed how the users interacted with the Frontier Behavioral Health website, assessed how the users navigated the website, and located specific information on a website. Frontier Behavioral Health expresses through their mission statement and values, under the “About” page of the website, that they are dedicated in providing clinically and culturally appropriate behavioral healthcare and related services to people of all ages in collaboration with community partners. Through the findings I collect from my usability tests, I will examine how users respond to the design of the Frontier Behavioral Health website.

Literature Review

The literature review that follows touches on four major areas: technical communication, information design, usability testing, and cultural differences in user experience. These topics are essential to discuss in research because one can better learn how technical communicators utilize different concepts when communicating with individuals or large groups of individuals from diverse, cultural backgrounds, as well as the benefits of utilizing usability testing.

Technical Communication and Information Design across Cultures

Tufte (1990) claims that “principles of information design are universal—like mathematics—and are not tied to unique features of a particular language or culture” (10). Technical communicators must think more than just about the type of information they are going to place on a document, website, product, etc. As noted by Still and Crane (2017), “good user-centered design is not about giving users what they want or making decisions for them. Rather it is giving them enough control to understand and manage the system in multiple situations” (13). Essentially, even though there are principles to design that belong in technical communication, not all users have the same, consistent, underlying

needs, so research must be conducted in order to effectively deliver information to diverse audiences.

A computer system is a tool, a tool for users to use with ease and efficiency to locate information in a satisfying manner. As Albers (2004) notes, "information systems should work to provide a user with high quality information that support complex situations" (158). Users want systems that are easy to learn, easy to use and that ultimately help them complete certain tasks. Users want software that "doesn't confuse them, that doesn't make it slow them down, that doesn't make it easier to make mistakes or harder to finish their job," (Albers, 158). The complexity of having users from different cultural backgrounds is just another factor that must be considered for information design.

Moreover, translation and localization are the two main strategies that technical communicators use to address these differences in language and rhetorical preference (Sprung, 2000). Cronin (2001) defines localization as "taking a product that is already designed and adapting it to a local market" (13). Because different cultures have different rhetorical preferences, localization can be a key step in making the information appropriate for the target audience. Germaine-Madison (2009) stresses that localization goes beyond translating the language the document is written. Germaine-Madison states that there are other issues, such as how the readers will use the document, specific content, and stylistic issues must also be considered (Esselink 2000; Yunker 2003, 128). Designers need to design interfaces targeted for a specific audience, who come from different cultural backgrounds. This requires the designer to know what interface features might be common in a given culture. When designers provide interface features that create a learning environment which learners understand and with which they are comfortable (Ingram et al. 2007), communication flows smoothly from the content to the learner (Recabarren et al. 2008).

Although limited research exists, it suggests that low acculturated Latino adults prefer Website features that are more relevant to the Latino culture (Singh et al. 2008). Culturally relevant features suggested by Singh and colleagues (Singh et al. 2008; Singh et al. 2009) include providing information and customer support in Spanish, reflecting a viewpoint that demonstrates how the organization serves and gives back to the Latino community, showing the value of family by displaying pictures of families and/or grandparents, integrating structure, and using clear navigation, color, graphics, web support, and unique products preferred by Latino Web users. In technical communication, information is generally written in the context of the host language and culture. For example, as a native English U.S. Citizen would design a website differently than a Spanish-speaking Mexican immigrant would. To achieve the best results when communicating across cultures, it is important to consider possible target languages and cultural contexts while designing technical documents. Different cultural expectations and practices can affect the way individuals from different

cultures present or interpret spoken or written information (Uljin and St Amant, 2000).

Furthermore, Yuan (2013) states that “culture makes a difference in shaping the design, implementation, use, and social implications of media technologies” (261). According to Weiss (1998), earlier research showed two intercultural adaptations branched out from the growing literature in business and technical communication: the culture-free approach and the culture-fair approach. The culture-free approach focuses on “the way to make a text easy to understand and translate”; first, they should be “writ[ten] . . . according to the strictest standards of clarity and simplicity and then strip[ed] . . . [of] all of stylistic peculiarities” (254). Culture-free documents focus on eliminating all “figurative language” and include “no wordplay, and no intentional humor” (255). Kirkman (1988) observed that non-English readers struggle when they encounter “common features of incompetent technical writing” (347). These common errors include: wordiness, ostentation, clumsy links, tense problems, jargon, passives, nominalizations, etc. (Weiss, 1998).

St. Amant states that “a new set of research questions, challenges, and dilemmas that professional communicators need to explore in order to ensure a productive intercultural dialog among different nations” is the next step that needs to be taken among all technical communicators (St. Amant, K., 2011, 206). St. Amant (2015) poses that technical communicators need to take the time to stop and collaborate on what the field of technical communication has accomplished, what we have examined, but also, what topics we must discuss now in order to provide better insights in the future. One topic St. Amant believes should be discussed among technical communicators concerns “... design[ing] materials for a specific audience. But in an age of global online media, who is our audience, and what implications are there for how different populations interpret and react to information?” (221).

St. Amant (2015) emphasizes the need to re-think technical communication and the research we produce by stating that:

Re-thinking research in terms of the technologies used and the contexts in which research takes place can provide new approaches to usability and lead to designs that better suit the needs of specific groups of users. (221)

In essence, St. Amant is creating an exigence for scholars, researchers, and professors of technical communication to re-think the various topics, based on the evolving needs of the users in our communities. He reminds us that our world is constantly changing, so we must think of innovative and creative ways to improve the world of technical communication. He challenges us to re-think our current practices to ensure a progressive field of technical communication that delivers information effectively and efficiently to our diverse populations.

Moreover, I would like to narrow the focus to how Latinos, specifically, are affected by web design. A study conducted by Clayman and her colleagues found that Hispanics, who are comfortable speaking English, were not more likely to use the Internet than non-Hispanic Whites and had very high trust ratings for information on the Internet. In fact, after healthcare providers, Hispanics comfortable speaking English were most likely to trust the Internet as a source of health information (Clayman et al. 2010). A study of data collected more recently than this administration of HINTS (Livingston et al., 2009) found that, despite recent increases in Internet use, a gap remained between use by native- and foreign-born Hispanics. This lack of fluency in reading English is a substantial barrier to Internet use. They also found that those who read well in Spanish were less likely to go online than those who read well in English. The Hispanics who are comfortable speaking English may be frequent users of these new methods of communication, as they have high usage of and trust in the Internet. However, for Hispanics who are less comfortable speaking English, the Internet and its associated content would not seem to be a good resource. This study concluded that Hispanics who are less comfortable speaking English exhibit different trust and media use patterns than their counterparts who are comfortable speaking English.

It is essential for those in technical communication to be knowledgeable about the cultural backgrounds of their prospective audiences. Further research is crucial in the field of technical communication and information design, to identify the differences among ethnic-cultural minorities. If there are audience members who speak a different language or communicate information differently than others, technical communicators must be prepared and equipped with the necessary knowledge and skill set, related to intercultural communication and design to diverse populations, so they may design and deliver effective information and communicate efficiently.

Cultural Approach to Usability Testing

It is necessary for technical writers to be educated on developing culturally sensitive approaches, as well as understanding the benefits of utilizing usability tests to ensure their products are culturally appropriate. The International Organization for Standardization (1998) defines usability as the “effectiveness, efficiency, and satisfaction with which a specified set of users can achieve a specified set of tasks in a particular environment” (Albers & Still, 2011). Usability is a goal that most technical communicators share. Usability, as defined by Nielsen, has five components: Memorability, Errors, Efficiency, Learnability, and Satisfaction, broken down as such:

- **Memorability:** When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- **Errors:** How many errors do users make, how severe are these errors, and how easily can they recover from the errors?

- **Efficiency:** Once users have learned the design, how quickly can they perform tasks?
- **Learnability:** How easy is it for users to accomplish basic tasks the first time they encounter the design?
- **Satisfaction:** How pleasant is it to use the design? (“Usability 101: Introduction to Usability,” 2012).

The aim of researching users for usability tests is to help designers identify their users' underlying needs (i.e. those that are not instantly apparent or accessible through questioning alone). Once we, as technical communicators, have established the needs of our targeted users, we can then develop new problem-solving approaches that accommodate the user's constraints and exploit their capabilities. Thereby, we increase the accessibility and empathy that go into the products that are created (e.g. websites, brochures). When facilitating usability tests and utilizing the M.E.E.L.S components to guide the tests, you will be “creating a balancing act” (192). In the end, technical communicators and designers want to achieve all of these elements, not just one. By using this method, technical communicators will be able to determine the elements of their test design and the usability of their product (Still & Crane, 2017).

According to Still and Crane (2017), there are two types of usability testing: A/B Testing (also known as Summative Testing) and Formative Testing. A/B testing “compares the usability of two competitive products, two prototypes of a product, or even an earlier versus a later version of a product” (192). Formative testing, also referred to as “iterative testing,” emphasizes “testing multiple times during the design process, using a small number of representative users to teach each iteration” (193). It has been agreed by many technical communicators that this type of usability testing is the most useful type to conduct during the design process. The benefit of using the formative usability test is “when you are testing small numbers of users multiple times, you get data about usability problems that can be fixed during the design process” (193). That way, when you test throughout the design of the product, before it is finalized, you can catch usability issues and major design problems that can be detrimental to your targeted user's experiences.

Website designers of international or intercultural communication must take their audience into consideration and respect cultural differences. An approach to optimize a website for users from various cultural backgrounds would be to evaluate the site, through usability testing, with potential users from all nationalities. Including users from all nationalities allows for the creation of a representative sample population. The evaluation would include a think-aloud protocol usability test. Think-aloud usability tests allow participants to act as real users and give insight into the mistakes they make and the doubts they have in the process (Hall, Jong, Steehouder, 2004).

In the end, for web owners to be successful and to increase user satisfaction, web sites must consider usability and other design criteria (Palmer, 2002). Nielsen (2000) found that users' performance improved by nine times when measuring the success based on user-centered navigability. Arguably, usability testing is one of the most important elements of technical communication. By conducting a series of usability tests with users who fit our targeted audience's criteria, we ensure that we are in fact relaying our message in an effective manner, while making sure that our users also have a user-friendly experience with our products.

By educating technical communicators on the importance of usability tests, we will be able to create more culturally sensitive information. In the end, the large-scope problem is that there continue to be disparities among Latinos accessing information regarding mental health services, as well as receiving mental health services. Research shows that Latinos are not only more likely to have psychiatric disorders than their Caucasian and African American counterparts but they are less likely than other ethnic/racial groups to receive care. Research also shows that an existing barrier is that they do not speak English, or they lack the knowledge of available services. Clients with limited English proficiency are unlikely to pursue care (Willerton et al. 2008).

Methodology

The thirteen participants, study site, and methodology were carefully considered when the study was proposed and ultimately approved by Eastern Washington University's IRB. This study adheres to the ethical and professional standards for the protection of human subjects of research that are formulated in the Belmont Report and the Nuremberg Code. During the informed consent process, the three elements of information, comprehension, and voluntariness were met and approved. The IRB also determined that the study does not pose any danger and the nature of the study poses minimal risk. The selection process of research subjects was assessed as fair when it came to the selection procedures, which would result in fair selection outcomes. What is to follow is information regarding the methodology I utilized to collect data, including the test goals and objectives set, the participant recruitment procedure and requirements to participate, the scenario and test tasks utilized during the usability test, and the framework used for the collection and evaluation of data.

Test Goals and Objectives

The objective of this study was to collect data from a series of usability tests, which will be used to examine how Spanish-speaking Latinos interact with a website that delivers information about mental health services. The goal was to identify usability problems, collect qualitative and quantitative data, and determine the participants' overall satisfaction with the website. More specifically:

how do Spanish-speaking Latinos navigate information on the Frontier Behavioral health website?

I chose to evaluate the Frontier Behavioral Health website for this study because it is a non-profit organization that has been serving the Spokane region for more than 100 years. Their website also states that FBH is the “lead service provider in the Spokane County Regional Support Network (SCRSN)” system of care. FBH is an organization that has been serving the community for decades and has built a reputation within Spokane county. Further, their mission itself states that they strive to “provide clinically and culturally appropriate behavioral healthcare and related services to people of all ages...” as well as making their “behavioral healthcare services timely, accessible, and barrier free...” I wanted to choose an organization that is in fact committed and dedicated to helping the diverse community of Spokane.

Participants

This section will focus on the participants of the test. This includes the recruitment process, presenting my user profiles, and describes the scenarios and test tasks the users were asked to complete.

Demographics

All demographic information was collected through the pre-test survey (see Appendix A for full survey). All participants are Spanish-speaking and identify themselves as being Latino/a. In this study, there were a total of 13 users (11 females and 2 males.)

Recruitment

During the recruitment process, I had specific criteria for a participant selection. All participants had to be 18 years old or older (legal age to consent), be of Latino/a descent (Mexican, Dominican, Peruvian, Puerto Rican, etc.), have Spanish as their first language, and be able to speak and read in both English and Spanish (so they may understand the test procedures and questions in English). No participants were turned away based on educational levels, technological skills or experiences, or income. I created four user profiles in order to form a representative sample of Latinos for this study: college student, single parent with a child or children, married with a child or children, elder (50+ years or older). I recruited through word-of-mouth and provided an electronic copy of my IRB approved flyer to potential users. I sent a recruitment e-mail to friends and colleagues regarding my thesis project (see appendix B.) Upon agreeing to participate, each participant and I determined which day and time would work best based on our availability. All usability tests took place in the technical communication lab in Patterson Hall (211 D).

Scenario and Test Tasks

Creating a scenario is a required and essential element of usability testing. According to Still and Crane (2017), creating scenarios for users provides them with the ability to work within a “fictional yet representative context” (209), which allows them to “operate inside of, representative of the actual use of environment, as they offer feedback” (168). I provided the user with a scenario of a hypothetical situation the user uses as reference, where they needed to perform a series of tasks directly related to the FBH website.

Scenario

You are a 32-year-old single parent, residing in Spokane, Washington, with your 8-year-old son. You just moved to Spokane from California about three months ago and just started a new job as the head housekeeper at the Red Lion Hotel in downtown Spokane. Your son has just started the third grade at Shadle Elementary School. Now, you just received a phone call from the school counselor informing you that your child has been experiencing difficulty staying on task, loss of interest in engaging with his peers, sadness, loss of appetite, and has been experiencing anxiety. Your son has also recently come forward and told his school counselor that he has not been sleeping well and has been offered to smoke cigarettes and drink alcohol with older kids, who meet up after school at Shadle Park. The school counselor has recommended you go to the Frontier Behavioral Health website to seek further services for your child, in order for you to get the help you need.

It is important to note that the language for the tasks was revised after participant five. The tasks were revised to be more scenario specific, in order to avoid any confusion or misunderstanding among individuals. Avoiding confusion or misunderstanding in the language of the written tasks prevents the task failures from being tied to the language I used throughout the study, but suggests that failures are user-related issues associated with the website itself. Revising the language helped to ensure that all participants continued to imagine themselves in that particular situation, to complete the tasks in that state of mind. For instance, task 1 used to read: what are the different types of services that Frontier Behavioral Health offers to youth (please list at least 3)? This did not allow the participant to refer back to the scenario that was read to them and it did not encourage them to place themselves in that hypothetical situation. It was then revised to: You want to do your own research before you inquire about the mental health services provided by Frontier Behavioral Health for your son. Explore the website to find the different types of services that are offered to youth/children (please list at least 3)? Relating the task to the scenario helps situate the participant in the hypothetical situation as they complete the tasks provided to them, to the best of their ability.

Test Tasks

Once the user received the scenario for the usability test, I asked them to complete five tasks. These tasks were specifically selected to reflect a real-life situation based on an adult with a child trying to receive services. The following tasks are:

1. You want to do your own research before you inquire about the mental health services provided by Frontier Behavioral Health for your son. Explore the website to find the different types of services that are offered to youth/children (please list at least 3)
2. You are wanting to get a better idea of how long it will take you to arrive to the nearest Frontier Behavioral Health clinic, so you can plan accordingly in the near future. Explore the website to locate the nearest Frontier Behavioral Clinic location in Spokane County, from where you are right now. Find the directions to the nearest facility.
3. You have now completed your research on the services provided by Frontier Behavioral Health and you have directions to the nearest facility. Next, you wish to find the steps you need to take in order to begin receiving mental health services for your son. Where would you find these steps listed on the website?
4. Your knowledge regarding mental health and common disorders is limited. You want to find material to read, so you can become more educated on such topics. Where on the website could you locate resources to read, regarding mental health and common mental health disorders?
5. You are committed to getting your son the help he needs, but you are concerned about the cost of treatment. Where on the website can you locate the different forms of payment that are accepted at Frontier Behavioral Health?

Metrics

This study required a mixed-methods approach to collect data. While each participant navigated through the website and completed each task, I asked users to "think-aloud." Think-aloud protocol encourages the test participants to use the website while continuously thinking out loud—verbalizing their thoughts as they move through the user interface. For example, as a user completed each task, they talked aloud, expressing their thought process and verbalizing why they were making certain decisions (clicking on a link, searching for a keyword). Once the user felt they had completed their task, or found the information they were asked to find, they said "done" or "found it" out loud. As Barnum (2011) states: "hearing from the participant while he or she is working, and learning what pleases, frustrates, confuses, confounds him or her is illuminating," (205). This information is essential to collecting qualitative data that will illuminate user-related issues that may occur, that are directly tied to the design of the website.

I used the "see-say-do triangle" to collect data, as displayed in Table 2. Still and Crane (2017) developed the see-say-do triangle, as a method for close observation during usability testing. I chose this framework because it allowed me to have a close observation of the user's physical, verbal, and emotional responses to the website—which would deepen my understanding of their overall experience. The elements of the see-say-do triangle include: observing what users do (see), listening to what users say (say), and measuring what users do (do). According to Still and Crane (2017), through the use of the see-say-do triangle, you balance observation, self-reporting, and performance data (191). For the "see" element, the designer would observe what the users are doing while interacting with the design (product). This kind of observation includes user navigation with the design and user behavior (emotional responses, body language). The "say" data is the user feedback you obtain about the design (product). For this study, I utilized think-aloud protocol (TAP), pre-test surveys, and post-test interviews, which are all under the "say" category. According to Still and Crane, "TAP asks users to talk about their thoughts and decision-making processes while completing tasks" (203).

Then, the survey and interview collect data about the user's thoughts on mental health services in general, but also gauge the user's satisfaction after the usability test (what they find most appealing; what they struggled with) and allow them to write as little or as much as they would like to offer. Finally, the "do" refers to the performance data. This includes the time on task, mouse clicks, and error rates. The time on task refers to the amount of time (seconds) the user spends completing each task. The mouse clicks refer to the number of clicks a user makes, per task. The mouse clicks include clicking on a link, hitting a submit button, etc. Then, the error rates include the number of errors made and the severity of those errors, which may occur during a task. Through the use and collection of data through the see-say-do triangle, I will be able to note the "patterns, errors, gaps, and even incidental actions from different sources, each one representing a different approach: user performance, user verbalization, and designer observation" (Still & Crane, 69). All this data will not only point to the navigating and thought process of a sample of Spanish-speaking Latinos, but also bring out any user-related issues they may encounter with the Frontier Behavioral health website.

I used two metric scales when analyzing the tasks completed by the users. The first was a task completion scale that I used to assign how easy or difficult it was for each participant to complete each given task. This metric scale is the one that is already prepared for use in the MORAE audio-video screen recording software. This metric scale goes along with the efficiency and learnability guidelines of usability testing (see Table 2).

Rate	Description
0	Completed with ease—user was observed being able to complete the task with little to no frustration or confusion
1	Completed with difficulty—user was observed being able to complete the task, but struggled either with the navigation process, locating the correct information, or understanding what was being asked
2	Failed to complete—user was observed not being able to complete the task due to a variety of factors

Table 2: Ease of Completing Task Scale

The second metric scale I used was an error severity scale. If there was an error(s) made during a given task, I would assign it a rating, based on the severity of the error (see Table 3). This error scale is the one that was already in place by the MORAE Software. This is important to consider because, if there are a high volume of catastrophic errors occurring during certain sections of the website, this can point to a real design issue.

Rate	Category	Severity Description
1	Catastrophe	User cannot complete task; user can complete the process but express extreme irritation at the process; or user needs assistance
2	Serious	User is frustrated but gets through it; suggests that others may be less inclined to put up with the inconvenience or that frustration will be high
3	Cosmetic (minor)	User may hesitate or pick the wrong option, but user corrects it without incident; or user expresses minor irritation or annoyance, but it doesn't affect ability to complete task

Table 3: Error Severity Scale

Once I provided the participant with a consent form and it was signed, I pressed record through MORAE and it prompted the pre-test survey. The pre-test survey asked a series of questions that were split into four sections: demographic information, language proficiency, mental health services (if they had ever accessed MHS, how likely they would be to pursue MHS), and technological skills (for full pre-test survey, see Appendix A). After each participant concluded the usability test, I pressed the "stop recording" button through MORAE. This prompted the post-test interview, which was composed of six questions varying from "what did you find most appealing about the website" and "what do you feel is the website's purpose?" (for full post-test interview, refer to Appendix B).

Results

In this section, I will be presenting data collected from the pre-test survey, usability test, and the post-interview. The data collected was used to address the research question: how do Spanish-speaking Latinos navigate information on the Frontier Behavioral health website? In this section, I will solely present data collected from the study, and then follow into the discussion, where I will provide an interpretation of this data. The results of this study point to a few issues with the user's experience in navigating the website with ease. These issues are not a reflection of the user's ability to explore a website but point to a larger issue related to the design, which negatively affected these users' experiences.

To begin, I will review the demographic information relevant to this study, which was collected through the pre-test survey. Although I created these user profiles, I was mainly able to gather individuals from the college student profile, due to limitations (no responses from other user groups). As mentioned before, due to difficulties recruiting Spanish-speaking Latinos who were willing/had the time to participate in the study, the majority of the participants were currently enrolled students at EWU.

Demographics

Of the total of 13 (n=13) participants, the youngest is 21 years old and the oldest participant is 31 years old. All participants graduated and received at least a high school education. The participants fell in the following categories: five with "some college," one with an Associate Degree, five with a bachelor's Degree, and one with a master's Degree. Moreover, individuals are Eastern Washington University (EWU) alumni and are all working full-time. The remaining ten individuals are current students at EWU and fall into the following categories: four full-time, three part-time, and three are unemployed but remain full-time students.

Out of all thirteen participants, when ranking their proficiency in speaking, writing, and reading in Spanish, one participant claimed to be on a basic level, ten claimed to be on an intermediate level, and two participants claimed to be on an expert level. When ranking their proficiency in speaking, writing, and reading in English, zero claimed to be on a basic level, four participants claimed to be intermediate, and nine claimed to be on an expert level. Regarding their technological experience and skill level, the average (mean) rating [basic knowledge, intermediate (practical application), or expert] was 2.43.

All 13 participants responded that they have access to a laptop, computer, or tablet. When assessing how familiar the users are in using a computer, tablet, or laptop, they chose a number based on the Likert scale: where one represented not at all familiar, five indicated extremely familiar. The average (mean) rating was

4.86. This meant that almost all participants rate themselves as being “extremely familiar” when using a computer, tablet, or laptop.

There was a following question that asked about their comfort level in navigating the internet to search for important information. They were asked to rate themselves based on a Likert scale, rating of one through five, poor to excellent. The average (mean) answer to this question was 4.86. Again, this showed that almost all participants rated themselves as having “excellent” comfort levels with being able to access information through internet exploration.

All participants were asked how much time (hours) they spend a day using technology. The available options were: less than an hour, 1-2 hours, 2-3 hours, 3-4 hours, or 5 or more hours. All participants answered that they spend 5 or more hours a day using some type of technology device. All participants had internet access at home. This was no surprise due to the fact that a large portion of these participants are actively enrolled university students, who have been exposed to and participated in a lifestyle that revolves around the constant use of technology (computers, cell-phones, tablets, laptops) in order to access needed information. Information was described as any research topics or questions they wanted to learn more about.

Results: Time on Task

By providing these results on how long it took each user to complete a task, I was able to identify which task(s) took the least amount of time to complete, as well as the longest. Through this data, I was able to carefully see which factors contributed to these outcomes, which shed light on their overall experience. Figure 1 highlights the average time (seconds) it took for all (n=13) users to complete tasks 1-5. When measuring these tasks, I began the “task time start” when the user began scrolling and moving the mouse, to navigate the website. The task ended when the user located the information and verbally announced that they had “found it” or “were done.” If they did not verbally state so, I would ask the user if they had completed their task or if they were going to continue searching.

The average (mean) amount of time spent on each task, in seconds, are as follows: task one (different types of services provided to youth/children) (85.66), task two had the least average of time spent on task of 4.66 seconds (finding the closest FBH facility and directions to that facility) (61.32), task three (steps to follow to begin accessing MHS) (21.12), task four had the highest average of time spent on task with 288.33 seconds (locating resources to read, regarding common mental health disorders) (67.05), and task five (finding the different methods of payment accepted by FBH) (45.42)

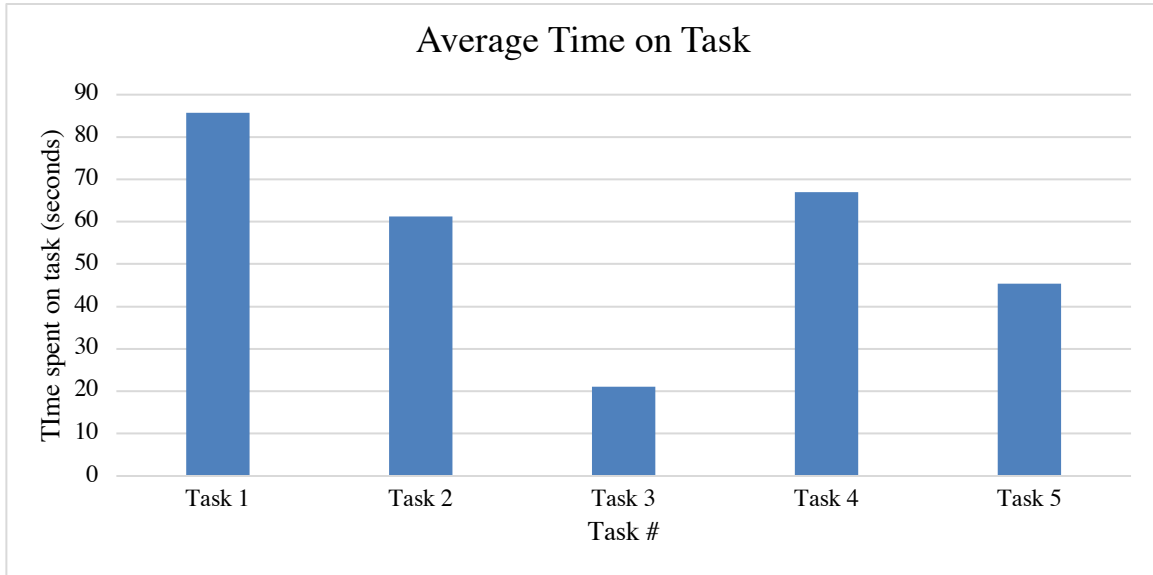


Figure 1: Time on Task

Results: Mouse Clicks

Presenting the results of the amount of mouse clicks it took per user provided me with the opportunity to compare the factors that may have influenced multiple clicks versus just a few clicks. For example, if there was a task that had taken a long time to complete with a high number of mouse clicks, I would begin to analyze why this was happening and if it was negatively affecting the user's experience.

Figure 2 demonstrates the average number of mouse clicks performed per task, for all participants (n=13). This data was set to measure the amount of time the user clicked on their mouse, whether it was to click to move around on the page or to select a hyperlink. The average (mean) amount of mouse clicks, per task, are as follows: task one (5.54), task two (5.46), task three (1.85), task four (7.15), and task five (4.54). This data shows that on average, task four (locating resources to read, regarding common mental health disorders) had the highest amount of mouse clicks, and task three (steps to follow to begin accessing MHS) had the least amount of mouse clicks.

For task one (different types of services provided to youth/children), task two (finding the closest FBH facility and directions to that facility), and task three (steps to follow to begin accessing MHS), the minimum amount of mouse clicks was zero because those participants chose to stay on the homepage and did not navigate elsewhere to complete the given tasks. The maximum amount of mouse clicks was 19 for both task one (different types of services provided to youth/children) and task four (locating resources to read, regarding common mental health disorders).

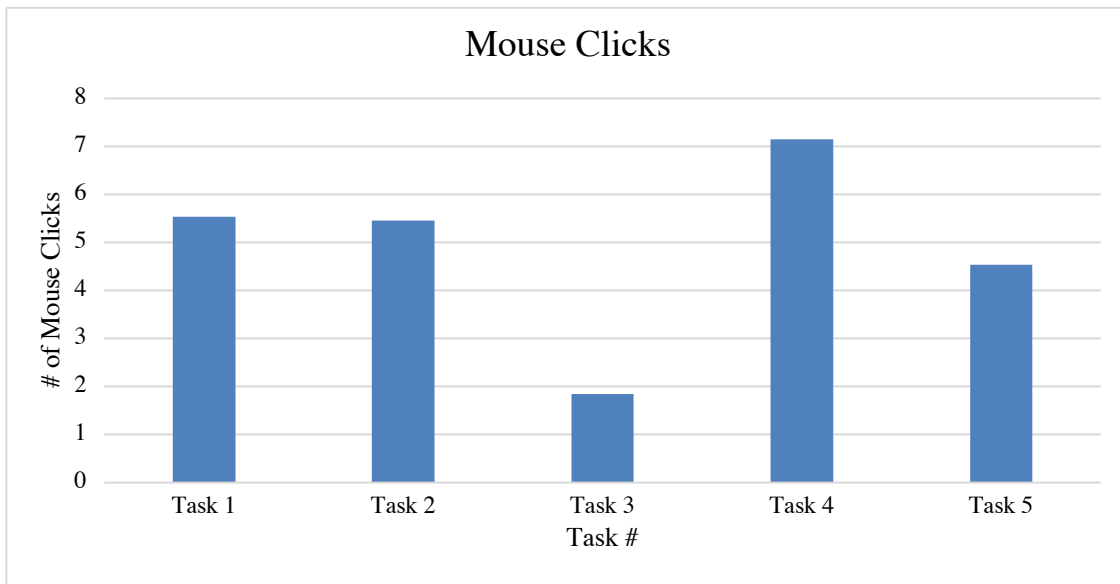


Figure 2: Mouse Clicks

Results: Task Success

The data also shows the level of success achieved on behalf of all users (n=13), per task (see Figure 3). Task success was assessed based on the level of difficulty the user experienced, while completing each task. They were assessed based on three levels: completed with ease, completed with difficulty, or failed to complete. For example, this data shows that zero participants failed to complete task five. Data also shows that task three (steps to follow to begin accessing MHS) and task five (finding the different methods of payment accepted by FBH) were the easiest to complete, with 11 of 13 participants falling under that category. The task that was most difficult and had the highest amount of task failure, was task one (different types of services provided to youth/children), with 7 out of 13 participants were category.

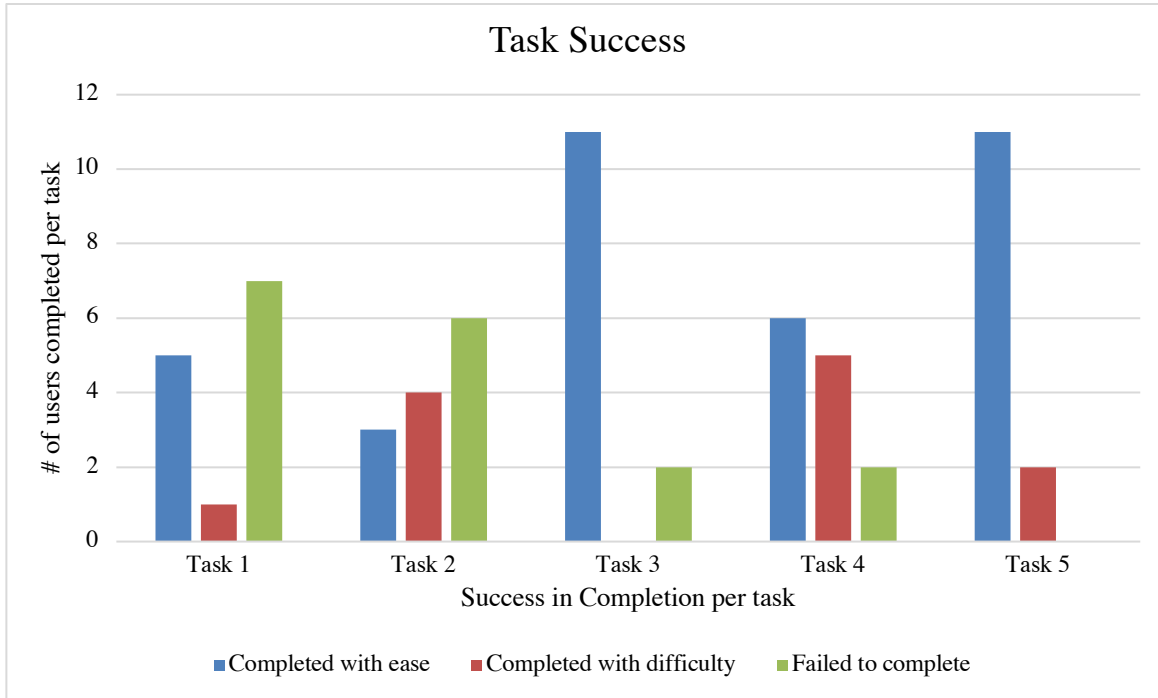


Figure 3: Task Success: Measuring the Task Completion and Level of Difficulty

Additionally, in Table 4, I provide data that shows the percent of all users (n=13), who were assessed under the three categories of level of difficulty in completing each task. This data shows the average percent of users who were able to complete (or failed) each task and at what level of difficulty. For example, for task one (different types of services provided to youth/children), 38.46% of the total 13 participants completed the task with ease. But task one also has the highest number of users who failed to complete the task with 53.85% of all users falling under this category. This table demonstrates that task three (steps to follow to begin accessing MHS) and task five (finding the different methods of payment accepted by FBH) were overall the “easiest” task to complete, with 84.62% of all users being able to successfully complete the task with “ease.”

	Completed with ease	Completed with difficulty	Failed to complete
Task 1	38.46%	7.69%	53.85%
Task 2	23.08%	30.77%	46.15%
Task 3	84.62%	0.00%	15.38%
Task 4	46.15%	38.46%	15.38%
Task 5	84.62%	15.38%	0.00%

Table 4: Average User Task Success (percent)

Results: Number of errors made, and error level assessed

Lastly, I present Table 5, which highlights the different types of errors made, per task, among all user’s total (n=13). In regard to assessment, the catastrophic

level errors were the ones where the user cannot complete the task, can complete the process but express extreme irritation at the process, or needs significant assistance. Serious level errors are when the user is frustrated but gets through it—suggesting that others may be less inclined to put up with the inconvenience or that frustration related to that task.

And finally, the cosmetic (minor) level errors are when the user may hesitate or pick the wrong option, but the user is able to correct it without incident, or if the user express minor irritation or annoyance, but it doesn't affect their ability to complete the task at hand. In total, for the entire study, there were four cosmetic errors, four serious errors, and ten catastrophic errors. Task one was the leading cause of catastrophic level errors, with five of the total of ten errors made in that category. Task three had the highest amount of serious errors, with three of the total four errors made in that category. And task two had the highest amount of cosmetic errors made, with three of the four total errors made in that category.

	Cosmetic	Serious	Catastrophe
Task 1	1	0	5
Task 2	3	3	3
Task 3	0	0	1
Task 4	0	1	1
Task 5	0	0	0
Total	4	4	10

Table 5: Error Level Per Task

There were various factors that contributed to the users having a frustrating and confusing experience when interacting with the Frontier Behavioral Health website. We will now transition to the findings, where I will review and interpret the results.

Findings and Discussion

When examining the results of this study, I looked at usability and the user experience to gather a deeper understanding of what had happened. Usability is what allows users to accomplish these series of tasks to accomplish one goal with ease. Studying usability allows us to see if the users were able to utilize the product effectively and efficiently when having this interaction with the website. The user experience is valuable because it provides you with an insight into what factors contributed to their positive or negative experience, as well as evaluating whether or not the user was able to have a satisfying and meaningful experience during this interaction.

Before reviewing my findings and providing my interpretation, I would like to look back at MEELS, which will help explain the findings:

- **Memorability:** When users return to the design after a period of not using it, how easily can they reestablish proficiency?

- **Errors:** How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- **Efficiency:** Once users have learned the design, how quickly can they perform tasks?
- **Learnability:** How easy is it for users to accomplish basic tasks the first time they encounter the design?
- **Satisfaction:** How pleasant is it to use the design? (Nielsen 2012). The major findings from this usability test were related to issues with learnability, memorability, efficiency, and error resistance.

In this section I analyze data to interpret the various factors that influenced task failure, errors made (cosmetic, serious, catastrophic), why they were made, and patterns observed among all users during the usability testing project. In this section, I also analyze errors made during this study that were due to the design of the website, not because of the users' abilities, experience, or intelligence levels. There were three levels of error: (1) catastrophic, (2) serious, (3) cosmetic.

While I review these errors, I will expand on the user's experiences during the most difficult tasks and some common patterns observed among the users. There were five catastrophic errors made for task one (locating the services provided, specifically for youth/children). For task one (different types of services provided to youth/children), the users struggled to learn how to navigate the website, due to its homepage design and were forced to utilize the information on the homepage to complete their task (see Figure 4). This was a failed task due to the users coming face to face with barriers that did not allow them to easily access information about what services FHB provides to youth/children in the Spokane county. The scenario they were provided for the test stated that they were on the website in the first place to receive mental health services for their eight-year-old son. The website's mistake of not placing the menu in a visible area presented a navigation and accessibility issue to users. Therefore, the users were unable to see the full list of services provided that their theoretical child would be able to access.

Task one took the longest amount of time to complete, with an average of 85.66 seconds to complete. Task 1 also had the highest number of clicks out of all tasks, with an average of 5.54 clicks (highest of 19, lowest of 0). Task one had a 46.15% completion rate (ease and with difficulty) and a 53.85% failure rate, which was quite significant. The users were observed experiencing difficulty in learning the website and were still unfamiliar with navigating efficiently to locate information. There was a total of six errors made for this task: one cosmetic, five catastrophic.

When looking at all of the data for task one, there was a significant issue with learnability. There was also an issue with efficiency. The users were not able to find information they wanted in a timely manner. Because users were not familiar

with the website, they struggled and spent the largest amount of time on this task, and unfortunately some users even gave up. Right on the first task, I began to note that users were becoming frustrated with the lack of a visible menu or search bar to make their navigation process easier and more efficient.

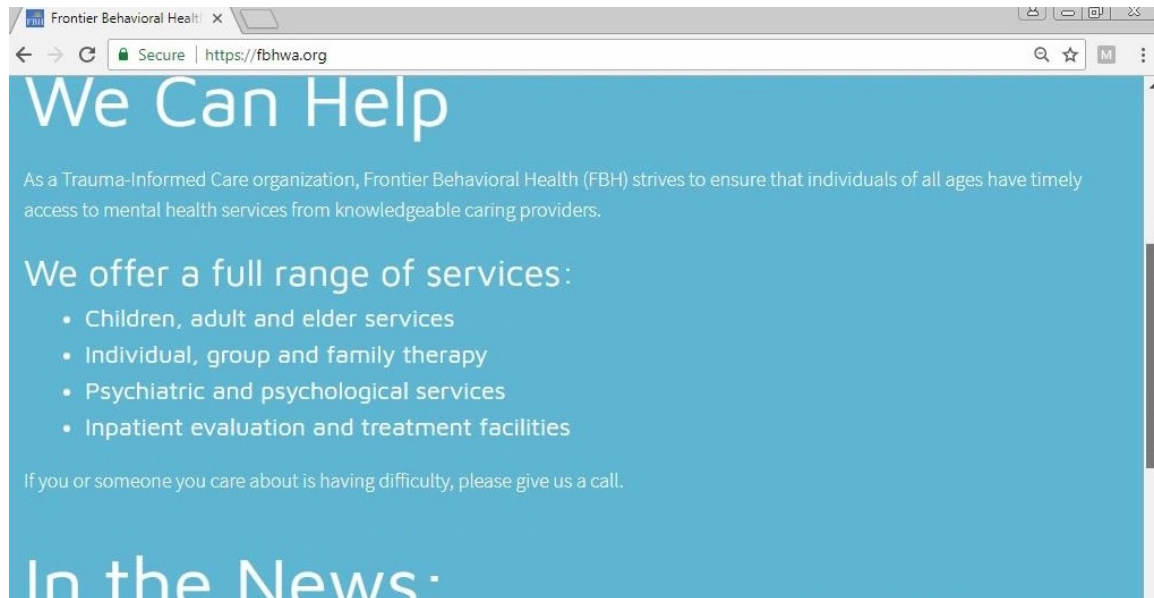


Figure 4: Frontier Behavioral Health Full Range of Services on homepage

Additionally, five users were unaware there was a menu button at the top of the homepage, and one user became frustrated and gave up on the task because he was unable to locate the information. Users were struggling to locate the "Menu" link because it was so small and all the way at the top (see Figure 5). This design decision began causing issues for the users and created an unsatisfying experience. Participant five discovered the menu button by task three (steps to follow to begin accessing MHS), stating: "Is this the full menu? [pointing to the top of homepage with cursor]. Look at that ... the menu has directions! Clearly I wasn't navigating this website fully [laughs at self]." Participant six, who was aware that the menu button existed but became frustrated, expressed his internet browsing process: "My instincts are to go to the menu, to find something like 'types of services... There's a lot of text... which I'm not going to read. As a user, I'm trying to scan. But I can't read any headers or keywords.'" As the user continued to explore the website, he became visually frustrated and confused, so the user went back to the homepage to see if they could find the information they were looking for. After a few minutes of searching, the user exclaimed: "I don't see a button that says 'youth services' or 'children.' I'm pretty much confused and ... I give up."

The participants who were unable to complete the task were marked as "failed to complete" and were assessed at a catastrophic level of error, due to two primary reasons. First, the services provided towards the bottom of the homepage are

the general services provided to children, adults, and the elderly. This was an honest mistake because that information is not labeled in a way that directly says, “General services provided” or “Services provided to youth.” The users were confused about the language used on the homepage and were unsure where to navigate on the website.

Second, the users continued to struggle to find a way to navigate outside of the homepage and because of the visibility issue of the menu link. The menu link forms into a drop-down menu (see Figure 6) to locate the services that Frontier Behavioral Health specifically provides for youth/children. The scenario provided at the beginning of the usability test emphasized that their sole reason to explore the website was to find valuable information that would lead to receiving mental health services for their son. If this were a real-life scenario, the user would begin to get frustrated or would be misinformed, both of which would not be their fault, but the result of a design issue.

Task one also had one cosmetic error made (locating the services provided, specifically for youth/children). Participant 9 was unable to complete the task and was assessed at a cosmetic error level type for task one. This user clicked on “Programs,” under the main drop-down menu, and then read off the general services provided by FBH, instead of searching for the services provided to children/youth specifically. Again, if this user’s experience reflected a real-life situation, and the user was a mother of an eight-year old, who is currently in crisis, they would want to receive the accurate information needed to learn about the different types of services that are provided to children/youth. That way, they can assess which service(s) they needed and which they would request in order to best serve their child’s needs.



Figure 5: Frontier Behavioral Health ‘menu’ link on homepage

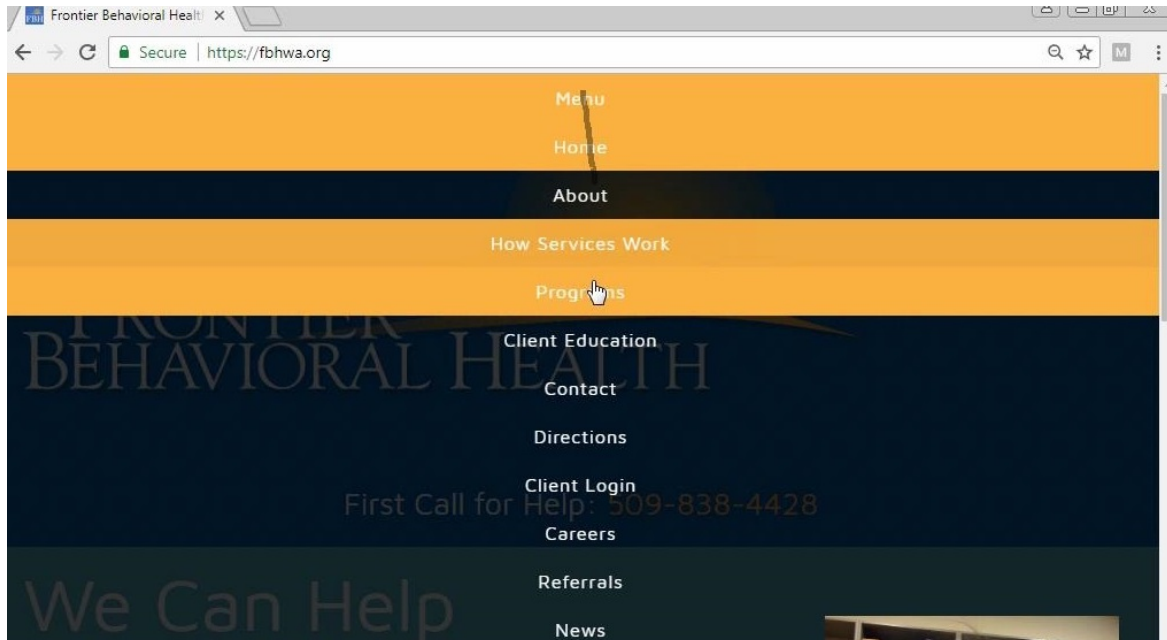


Figure 6: Frontier Behavioral Health 'drop-down menu' on homepage

During task two (locate the nearest FBH facility to your current location and access directions to that location, for future reference), users continued to struggle to complete the given task. There were three users who looked up multiple locations instead of focusing on finding the closest one to their current location. On average, users spent 61.32 seconds to complete the task. There were three users who took a significant amount of time to complete. User 8 spent 114.86 seconds to complete this task, user 9 took 152.54 seconds to complete, and user 12 took 109.35 seconds to complete. These users took longer than anticipated, due to the confusion of where to navigate to complete their task. Two of these users navigated over to the correct page but were unable to investigate which facility was closest to their current location and were unable to access directions to that facility.

Again, the learnability issue came about. They took a long time because they were attempting to become familiar with the website and become more comfortable with the navigation of the website but were unable to. But then there was one user who spent 4.66 seconds to complete the task. This user spent the least amount of time because they stayed on the homepage and did not navigate the website. This pointed to the learnability issue observed in task one. Individuals were still struggling to get the hang of how to efficiently and effectively navigate the website to locate specific information.

During task two, there was no significant difference in mouse clicks, with an average of 5.46 clicks made during the completion of this task (highest 16, lowest of 0). There was also a 53.85% completion rate and a 46.15% failure rate. But most significantly, there were a total of nine errors marked for this task: three cosmetic, three serious, and three catastrophic errors made. These errors

occurred for two main reasons: (1) the user was confused on the difference between the “contact” and “directions” pages (both pages had the list of all the facilities in Spokane county, but the user was unclear on which facility was closest to their current location), and (2) the user did not navigate past the homepage. At this point, users were observed getting progressively frustrated as they struggled to learn how to efficiently and effectively navigate the website and where to go to locate specific information.

All three of these participants failed to complete this task, due to being unable to move past the homepage to locate the “Directions” tab under the drop-down menu. Instead, all three participants named the main facility (see Figure 7) as the nearest facility. This posed a real-life issue because users did not have an idea on where they would need to go to find the nearest facility to them and then access directions to that facility for their convenience. These errors continued to be tied back to users struggling to locate the “Menu” link located at the top of the homepage.

Task two (locate the nearest FBH facility to your current location and access directions to that location, for future reference) had three cosmetic errors. Participants two and four were able to complete the tasks, but with some difficulty. Both participants were assessed at a cosmetic level error for the completion of task two. Participant two was able to find the FBH facility that was the closest to them but was unable to access directions to that facility. Comparatively, participant four was able to locate the closest facility, but again, did not actually access the directions to that facility as asked. Participant four stated: “I would say this is how I would be able to look at it... depending where I’m at, I could put the zip code,” as the user was pointing to the “Search Locations” bar on the page with their mouse cursor (see Figure 9).

As for the serious level errors, participant 10 was unable to complete the task and was assessed at a serious level error. Participant 10 stated: “I would click programs. And I would put...I would look at all the services that they have on here, like adult services, recovery treatment...is that it? [I responded that I could not directly provide a yes/no answer and they should utilize their best judgment] I’m going to say yes.” This particular participant was observed wanting to find the most effective and efficient way of completing each task but was still unsure on whether or not the information was correct.

At task three (steps needed to take in order to begin accessing/receiving mental health services from FBH) learnability, efficiency, and memorability significantly improved for at this point in the study. On average, task three was completed in 21.12 seconds. This was the fastest completion time for all tasks. Showing more efficiency in completing the tasks. There was also an average of 1.85 mouse clicks, which was the lowest of all five tasks. For this task, there was only a 15.38% failure rate and only one error made (catastrophic).

The data points that by this point, the users had gained more confidence in themselves and were able to navigate through the website with a bit more ease. The users began spending time more efficiently due to increased memorability. The users began utilizing the drop-down menu, which helped them navigate more efficiently. Users at the point were familiar with navigating the system. The one error that was made was due to one user who still faced the barrier the design posed—which was being unable to see the menu link.

At this point I began noting the pattern, among a series of participants, who were unable to clearly see the labeled “Menu” link, and thereby, were unable to use a drop-down menu on the homepage. Instead, these users were forced to complete the task by locating information to complete task three on the main page. Participant 3 stated: “It says first call for help... so I guess, first call for help,” inferring that they would call the first Call for Help hotline number in order to begin receiving mental health services (see Figure 7). This was a task failure at catastrophic level for two reasons. The first could not locate the menu because it was not visible to them, which pointed to a major design error. The second reason was because the First call for Help number is a crisis hotline number, for individuals who may be in crisis and are in need of immediate psychiatric or medical assistance. But there was no subtitle or caption that explained this to users, who may be unfamiliar with this crisis hotline. The users that were able to complete this task successfully and locate the information needed were able to find the lists of steps needed to take in order to begin accessing mental health services under the “How Services Work” link under the menu (see Figure 6).

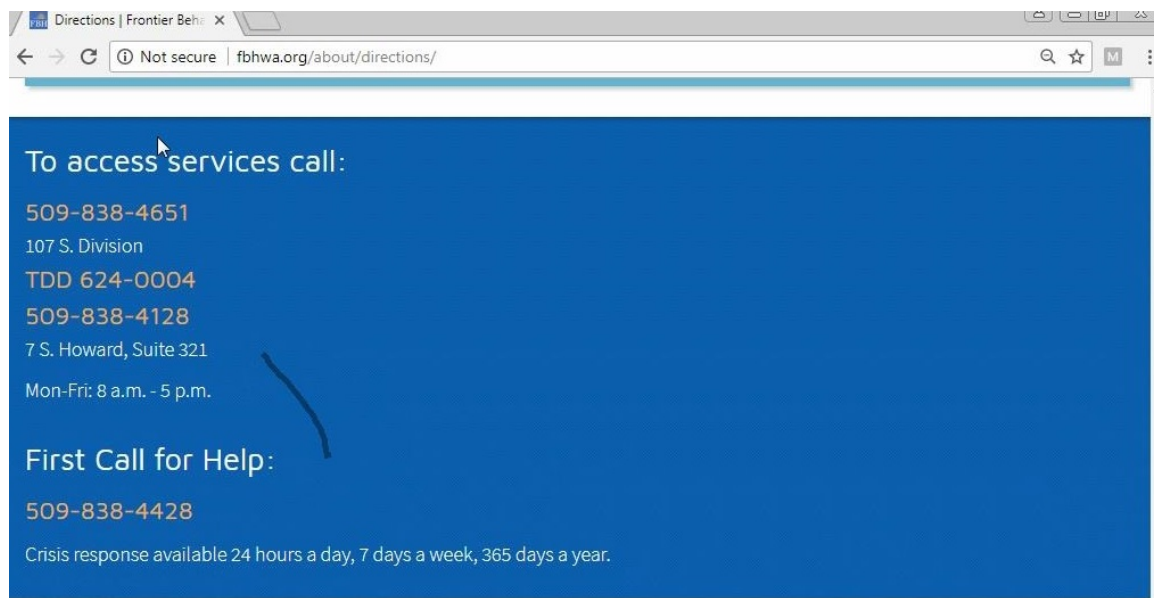


Figure 7: Frontier Behavioral Health Primary Contact Information on homepage

For task four (locating resources to read on the website regarding mental health and common mental health disorders), there was one catastrophic error made. Participant 12 was unable to locate resources to read regarding mental health

services on the Frontier Behavioral Health website, because of the continued visibility issue with the menu. These resources can be located by clicking the “Client Education” link on the main drop-down menu (refer to Figure 6). The user stated: “I would say under ‘programs,’ because it tells you what you’re looking for...” The user expressed confusion and hesitation, which ultimately led to task failure.

Task two (locate the nearest FBH facility to your current location and access directions to that location, for future reference) had three errors and task four (locating resources to read, on the website, regarding mental health and common mental health disorders) had one error, with a total of four serious level errors made overall. Regarding task two (closest facility and directions), both participants 7, 12, and 13 were assessed at a serious error level. All three participants were unable to complete the task. Participant seven was able to find the different FBH locations in Spokane County under “Contact,” from the drop-down menu (see Figure 8) but was unable to access the directions themselves.

This participant was unable to access directions or see which facility was closest because they were unsure about which page they were supposed to navigate over to (“Directions” tab under menu). Instead, participant 7 navigated under “contact,” scanned the list of locations, and then randomly picked from the list and stated: “I would say Frontier Behavioral Health on S. Division, Spokane.” Similarly, participant 12 and 13 navigated to “Contact,” as well, scrolled down the list of various locations, and picked a location at random. Participant 12 stated: “I just don’t know much of Spokane, so I don’t know which is close.” Then participant 12 went on to say: “okay, I’ll just say this one [pointing with the cursor to the first address on the list].” Both participants failed to complete the task. What the users were unaware of was that the website has two different pages where a user can see a list of locations. The problem with this is that one page has a list of locations, but the other has a list of locations and the ability to download directions to the closest facility. But there’s no clear way for a user to be able to distinguish the difference between these two pages and which they would navigate to in this situation.

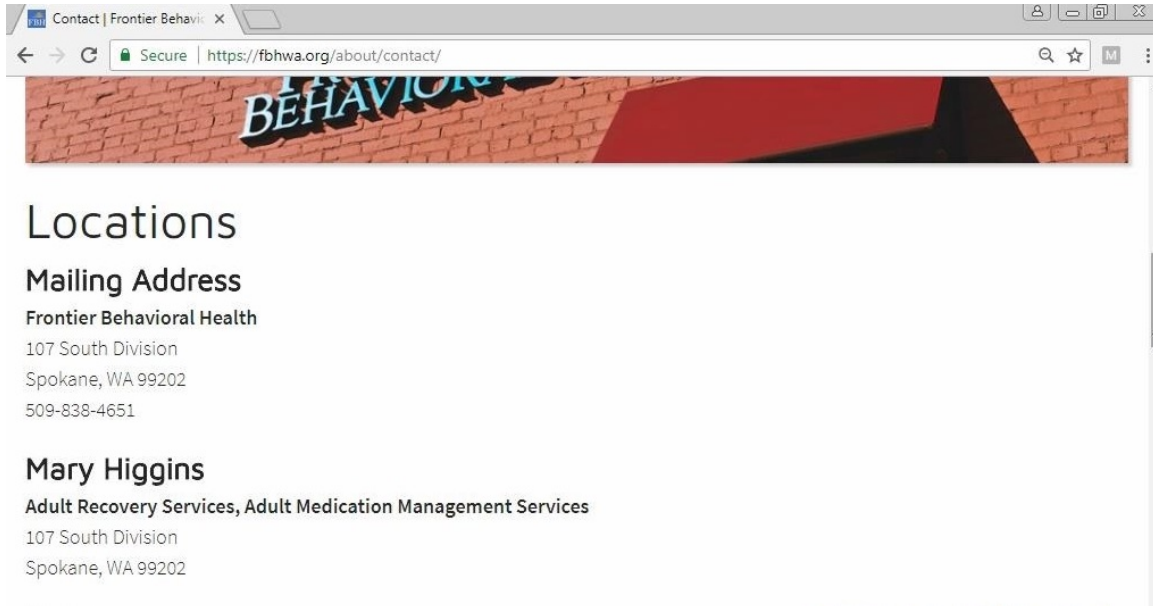


Figure 8: Locations list under 'Contact' of the Frontier Behavioral Health Website

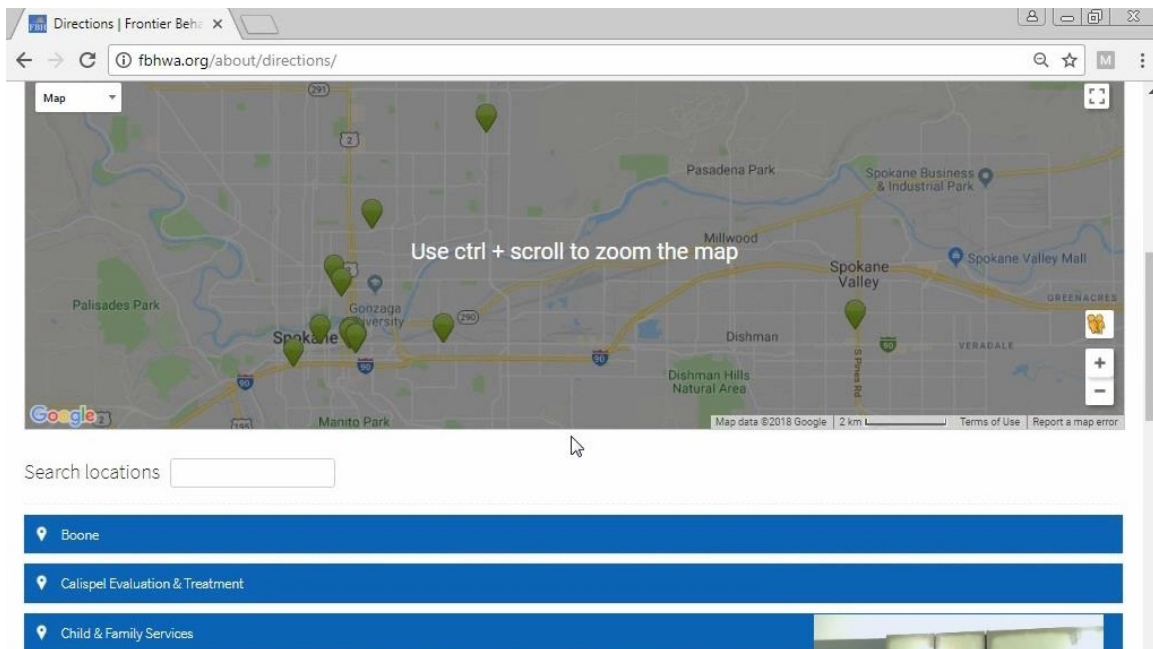


Figure 9: Directions page of the Frontier Behavioral Health website

Continuing with task four (locating resources to read, on the website, regarding mental health and common mental health disorders), users were observed to be improving in memorability and learnability. On average, users spent 67.05 seconds completing each task. For task four, users jumped to having an average of 7.15 mouse clicks. Specifically, there were five users who clicked on the high range (10 to 19 clicks). Fortunately, the failure rate was low with 15.38% and a total of two errors: one serious, one catastrophic. Although most users were able to complete it, users were observed experiencing difficulty because they were not

offered a search bar, so they may locate information with keywords. There were memorability and learnability issues because their learning system had not prepared them for this task for two reasons: (1) it was not efficient because they spent longer times completing this task, and (2) they were unable to connect keywords to the available menu options.

Finally, by task five (finding the different methods of payment accepted by FBH), users had become more familiar with efficient ways of navigating the website and were more confident being able to find accurate information. On average, users spent 45.42 seconds to complete this task and 4.54 mouse clicks (second lowest out of all five tasks). Most importantly, there were no errors made. Not only did the users improve significantly in learnability, memorability, and efficiency by the end of the study, but by the end, it became error resistant. It was error resistant in the sense that users were completing the tasks in a more efficient and effective way. But users who struggled or took a bit longer were still unfamiliar or uncomfortable with their experience. Due to their previous issues with navigating the site, some still doubted they were on the right track or were unsure.

In essence, the majority of the user experience issues were due to the design of content on the homepage—mainly, the lack of visibility of the menu button caused serious navigation and usability issues. The way that the Frontier Behavioral Health website has been designed made it difficult for the users to see and utilize, thereby negatively affecting accessibility to information on the rest of the website. The website also lacked a search bar, which would make the user's experience significantly easier with regard to locating specific information by using keywords or terms. Participant six expressed that from what they knew about websites, they could use the search bar. This user's previous experience had showed them that they could navigate and explore more efficiently with a search bar. This user quickly noticed there wasn't one and stated, "I don't see a search thing, so I'll try the menu. I'm looking for 'resources,'" when attempting to complete task four, which they did with some difficulty. Similarly, participant one stated: "I'm trying to look for something that says like 'learn about' or 'how to understand; but I'm not seeing anything,'" when referring to completing task four, which the user did with some difficulty. This supported the general thought process of the participants scanning for keywords, phrases, and the lack of the search bar made it difficult for them to locate specific information.

It was very difficult for users to accomplish basic tasks the first time they encountered the Frontier Behavioral Health website. This is where a few users were unable to move past the homepage because they were unaware of the menu button, to fully explore the site. There was also a memorability issue, when users were struggling to remember and learn the system and how to effectively use this site. Fortunately, by the third task, all users were observed to be improving using the system of the FBH website and were becoming more efficient in their navigating process. This was supported by the fifth task, which was the fastest to complete out of all tasks with the least amount of mouse clicks.

By the fifth task, it had become error resistant. The fifth task was achieved by all users without error, revealing no barriers in accessing information with ease and efficiency.

Conclusion

Among technical communicators, it is a well-known fact that the organization and design of content requires careful attention and detail. Redish (1997), among many technical communicators, have supported Shriver's claim that "many documents fail because they are so ugly that no one will read them or so confusing that no one can understand them" (432). Research continues to support that users blame themselves when they encounter a problem when using a product. When Shriver asked users who or what they blame, 63% stated that they blame themselves. This is a major problem, which my study continues to support.

This is a crucial problem that must be addressed with more in-depth research, especially among organizations like mental health care facilities, who design websites that have a purpose of educating and informing. Another problem that must be addressed is the false assumption that individuals from different cultural backgrounds, like Spanish-speaking Latinos, are not influenced in some way by these differences when interacting with a website, in order to access valuable information. There is a need for technical communicators to conduct further research that will bring awareness among mental health organizations, which will push them to pay closer attention to the design process, in order to ensure their site is barrier-free for their diverse users.

The purpose of this study was to evaluate how Spanish-speaking Latinos interacted with the Frontier Behavioral Health website. Through the data collected, I am able to conclude that the majority of these users struggled to complete these tasks in an efficient and effective way, due to barriers of design that the website poses. It is important to note that the users are not at fault—in fact, the way the information was designed and presented was what posed barriers to these users. My research suggests that if these users were unable to find information efficiently, they became frustrated and gave up. Further, when individuals were unable to locate the full menu, they were unable to navigate the website fully and comfortably. This resulted in many users blaming themselves for not taking notice and one user even felt "stupid." These findings show that the difficulty in accessibility and usability of the website was due to its design, not a reflection of users' abilities.

This is an issue because if the users blame themselves when they struggle to learn the system in a quick manner or are unable to locate information by searching for keywords in a language they are familiar with, they will leave the site due to confusion and/or frustration. Issues like these are what designers

must be able to find through usability testing to begin addressing these design-related issues that are causing unsatisfying and negative user experiences.

Moreover, most of these users experienced frustration and confusion, which led to either giving up and failing to complete the task or were able to complete the task but with difficulty. This study supports how usability testing can collect data that helps improve websites, in order to deliver a positive experience to users, while delivering information in an efficient and effective way. This resonates with Nielsen's (2012) statement: "If a website is difficult to use, people leave. If the homepage fails to clearly state what a company offers and what users can do on the site, people leave. If the users get lost on the website, they leave. If a website's information is hard to read or doesn't answer user's key questions, they leave" (1). This was proven to be true as I observed users become frustrated and confused while trying to navigate through the Frontier Behavioral Health website.

Usability testing is crucial when designing a website, particularly a website that has a purpose of delivering important mental health information to a diverse population of individuals. A part of Frontier Behavioral Health's mission is to strive to "provide clinically and culturally appropriate behavioral healthcare and related services to people of all ages..." as well as make their "behavioral healthcare services timely, accessible, and barrier free..." Their website's lack of usability contradicted this message. These users reflect an underrepresented population in mental health care. Research has continued to show existing disparities among ethnic minorities when it comes to accessing and receiving mental health services. By continuing this research, technical communicators can educate mental health organizations on filling this gap, by ensuring that diverse communities are able to access information on websites with ease. In the sections that follow, I will review the limitations of this study and then end with recommendations for future research.

Limitations of Study

The majority of the users who participated in this study were college-aged individuals. In the beginning of this study, I had four user profiles and I wanted to recruit at least four participants per category (16 total participants). These four categories were: college student, single parent with a child or children, married with a child or children, elder (50+ years or older). None of the participants had children, twelve of the participants claimed to be "single," and only one individual was "married but separated." The oldest participant was 31 years old and was not a student and did not have a child or children. In the future, I would like to collect data from all of these user profiles in order to form a representative sample of Latinos for this study. Recruiting participants from the other user profiles I created would provide data that would shed light on the differences between a wider range of language proficiency, age, occupation, and technological experience, to see how all of those factors influence their user experience when interacting with the frontier behavioral health website. Another

limitation of this study was that it was conducted using a Macintosh laptop, with a PC interface. I later discovered that the two interfaces have different homepage designs, which may lead to a difference in user experiences with the website. This could be further explored in future research.

Recommendations for Future Research

The findings of this study have brought forward issues that can be addressed by further research in the field of technical communication. This study points to the importance of information design when it comes to websites, more specifically websites that offer pertinent information regarding mental health services and behavioral healthcare. This research highlights the benefits of facilitating usability tests of culturally diverse users that may need to access this kind of information. When creating a website that is designed to guide users on the process of how to receive and access mental health services, specifically to ethnic minority users, designers must recognize that cultural backgrounds and language differences influence experiences. By expanding this research and exploring the factors that affect ethnic minority experiences when interacting with mental health care websites, organizations can better facilitate usability tests that improve the design of their website, allowing such websites to be more culturally sensitive and accessible.

What usability testing of the website design can do is shed light on potential barriers that can interfere with their diverse users' experiences. There can be issues with the design that can significantly affect the user's experience to the point where users are deterred from the website due to its inaccessibility or complex design. These barriers can then be directly addressed in order to provide the most satisfying experience to their targeted audience. The facilitation of usability tests would also help identify if there are significant issues with visibility and accessibility that may be contributing to the errors and difficulties users were observed experiencing during my study.

Future usability tests will help solidify the issues and major findings found in this study. More usability tests can shed light on issues that were not caught, due to the limitations of this study, or future tests can fill gaps that were not addressed with this study. Frontier Behavioral Health, like other mental health organizations, can greatly benefit from performing a series of usability tests on their website with representative users. Many mental health and behavioral health care organizations claim to be committed and dedicated to helping their direct, diverse communities, thereby they should invest in producing more research and tests that evaluate their websites, to ensure they are providing a satisfying, efficient, and meaningful experience to their users, as well as meeting their underlying needs.

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Appendix A: Pre-Test Survey

Question	Available options
Age	Textbox available for answer
Gender	Female Male Transgender Other (textbox available for additional answer)
What is the highest level of education you have obtained?	Less than high school High school graduate Vocational/trade school Some college Associates Degree Bachelor's Degree Master's Degree Doctor/Lawyer/ Doctorate Other (textbox available for additional answer)
Is Spanish your first language?	Yes No
How proficient are you in speaking, writing, and reading in Spanish?	Basic knowledge Intermediate (practical application) Expert
How proficient are you in speaking, writing, and reading in English?	Basic knowledge Intermediate (practical application) Expert
On a daily basis, how often do you communicate in Spanish?	Very frequently Frequently Occasionally Rarely Very rarely Never
When utilizing any form of services, do you ask for information in Spanish?	Yes No
How important is it for you to have access to information in Spanish?	Very important Important Moderately important

	Slightly important Not important
Do you experience difficulty in communicating in English? If so, how difficult is it?	Very difficult Difficult Neutral Easy Very easy Not applicable (no difficulty experienced)
What is your current relationship status?	Single Married Separated Divorced
How many children do you have?	0 1 2 3 or more
Are you currently employed?	Yes No
If you are employed, is it:	Part-time Full-time Not Applicable
What is your annual income?	Less than \$20,000 \$20,000-\$40,000 \$40,000-\$60,000 \$60,000-\$80,000 \$80,000-\$100,000 Greater than \$100,000
How likely would you be to seek mental health services?	Likert scale: Not likely 1 2 3 Very likely
Have you ever personally sought out mental health services for yourself, your child, or your spouse/significant other? If yes, for who?	Select all that apply: Yes No I don't have children I don't have a spouse or significant other Other (textbox available for additional answer)

How have you been informed about mental health services available to you?

Digital (email, website)
Advertisement
Brochure
Flyer
Mail
Word of mouth (being told by a colleague, friend, family member)
Other (textbox available for additional answer)

Are there any factors that have gotten in the way of you accessing or receiving information on the mental health services available to you or a member of your family?

Textbox available for open-ended answer

How would you rate your technological skills?

Basic knowledge
Intermediate (practical application)
Expert

Do you have access to a computer, laptop, or tablet?

Yes
No

How familiar are you in using a computer, tablet, or laptop?

Likert scale:
Not at all familiar 1 2 3 4 5 Extremely familiar

How comfortable are you navigating the internet to search for important information?

Likert Scale:
Poor 1 2 3 4 5 Excellent

On average, how much time do you spend using technology a day?

Less than 1 hour
1-2 hours
2-3 hours
3-4 hours
5 or more hours

Do you have access to internet at home? If not, where do you go?

Yes
No
Other (textbox available for additional answer)

Is it difficult to find information online in

Likert scale:

Spanish? How so?

Very difficult 1 2 3 4 5 Very easy

(textbox available for additional answer)

Appendix B: Recruitment Email

Dear _____,

I'm contacting you to inform you about my current thesis project, in hopes that you may be willing to voluntarily participate in my research study. As a part of the requirements of my master's program, English with an emphasis in Rhetoric and Technical Communication, I am currently conducting usability tests to collect data for my project. This project has been approved by the EWU IRB, so I have full permission to conduct this study.

I chose to contact you specifically because you fit the criteria for my study:

18+years or older
Have Spanish as your first language (Spanish-speaking), and
Are of Latino/a descent.

I would like to invite you to meet with me, at your convenience, on campus for approximately an hour for a usability test. The usability test will be audio-video recorded, through a software called MORAE, as you explore a website. During this usability test, I will be asking you to navigate through a website to locate specific information, based on the five tasks that I provide you with. This usability test is in no way testing your knowledge or ability to perform a certain way, I just want to observe the way you interact with the website. I am testing the website, not you, so do not be concerned about your capabilities to get the "correct answer," as there is none.

If you are able, and willing to participate, please email me back at rramos@ewu.edu or text/call me at 509-881-7858 so we can set up a day and time for us to meet and set the test up. The location will be on campus, in 211-D Patterson Hall.

If you have any questions or concerns, feel free to contact me and I will answer to the best of my ability.

I look forward to hearing back from you soon.

Regards,

Raquel Ramos

Appendix C: Post-Test Interview

- 1 What did you find most appealing about the website?
- 2 Did you find it easy to navigate and was it user-friendly? Why or why not?
- 3 Which task did you struggle with the most? Why did you think you struggled with that one specifically?
- 4 What do you feel is this websites purpose, after being able to explore it a bit?
- 5 What kind of barriers do you believe it would pose?
- 6 Overall, how would you rate this website in being able to deliver information in an effective way? Why?